

POLICIES IN MOTION: TRACING PAKISTAN'S URBAN TRANSPORT EVOLUTION

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by

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ABSTRACT

This essay critically examines urban transportation policies in Pakistan to understand the evolution of the urban public transport system. By dissecting and categorizing the problems associated with these policies, this study highlights the key factors contributing to the state of urban public transport in the country. The essay also utilizes examples of urban transport projects to substantiate the identified issues. Additionally, a timeline of significant transportation policies is presented to provide a historical context. The essay concludes by offering policy recommendations aimed at addressing the challenges faced by urban transportation in Pakistan. These include changes in land use from mixed use to zoning as well as policies to address the lack of strong legal institutions, lack of proper management, lack of investment, as well as engagement with a complex politics rife with inconsistencies.

BIOGRAPHICAL SKETCH

Mariam, hailing from Pakistan, is a Master's degree candidate in Regional Planning at Cornell University, with a focus on Infrastructure Policy, Management, and Finance. With a background in architecture, she possesses an understanding of the complex interplay between social issues and the urban fabric. It was however during her time at the Frontier Works Organization (FWO) that Mariam's interest in transportation and urban planning was truly ignited. Eager to deepen her knowledge, she embarked on an internship with WSP Baltimore's transportation planning group, immersing herself in the intricacies of the field before transitioning to a role in infrastructure Advisory consulting.

Growing up in Pakistan, she personally experienced the challenges of mobility and its impact on urban communities. This personal experience ignited Mariam's passion for improving urban transportation systems. She decided to tackle the issue in her exit project, aiming to contribute to the development of sustainable and inclusive mobility solutions in Pakistan.

ACKNOWLEDGMENTS

This project is dedicated to the strongest women in my life: my mother and my sister. Their support and encouragement have propelled me towards achievements I once only dreamed of. I am also immensely grateful to my whole family for providing support in all its forms, as it has been invaluable to my journey.

To my friends, both old and new, I am continually inspired by your presence in my life, and you consistently motivate me to push myself further.

I would like to express my gratitude to IIH group and John Foote for making me feel like a true Cornellian and for sparking my interest in infrastructure.
Infrastructure is HOT! IIH!

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LIST OF ABBREVIATIONS

ADB: Asian Development Bank
BRT: Bus Rapid Transportation
CNG: Compressed Natural Gas
FUTS: Faisalabad Urban Transport Society
GPS: Global Positioning System
IMTSI: International Metropolitan Transportation Systems Institute
JICA: Japanese International Corporation Agency
KCR: Karachi Circular Railway
KRTC: Karachi Road Transport Corporation
LTS: Lahore Transport System
NTRC: National Transport Research Centre
PSDP: Public Sector Development Program
PUTC: Punjab Urban Transport Corporation
SMEDA: Small and Medium Enterprise Development Authority
TSDI: Transport Sector Development Initiative

PREFACE

My journey in the field of urban planning began with a personal experience as a woman navigating the bustling streets of Islamabad, Pakistan. As I delved into planning projects in this vibrant city, I couldn't help but notice a glaring issue – the disproportionate and, in some cases, complete absence of women in the decision-making processes that shape our cities. It was evident that the decisions made by urban planners often exacerbated the challenges women faced in accessing the opportunities that the city had to offer, opportunities that are rightfully accessible to all citizens. In my view, the city was failing to ensure this equal access.

My background as an architect initially limited the scope of my perspective. However, this limitation eventually led me to pursue a planning degree at Cornell University. During my time at Cornell, I explored various facets of urban planning that shed light on the issue of access to opportunities from both tangible and intangible perspectives. Two areas of study particularly resonated with me as potential avenues for addressing this challenge.

In the beginning, the writings of Dolores Hayden inspired me to delve into the concepts of self-sufficient neighborhoods and thus co-ops. By self-sufficiency, I mean assessing the proximity of essential services such as hospitals, childcare support systems, and grocery shops. For women, these factors are of paramount importance, particularly when many do not have private cars at their disposal and heavily rely on walking or public transportation. As I delved deeper into this subject, I uncovered a more significant issue that demanded focused attention. The inadequacy, safety concerns, unreliability, and limited availability of public transportation that remained major roadblocks.

Before I could address the gender-specific challenges related to transportation, I realized that I first needed to direct my efforts toward improving the urban public transportation system as a whole. It made little sense to address gender disparities in transportation when the transportation system was failing to adequately serve the entire population. My research initially began by examining the physical conditions of transportation, but I soon found myself drawn to the policies governing the transportation sector. Policies offered a unique window into the interests of the governing bodies and the historical events that had led to the current state of affairs.

My research commenced with the belief that urban public transportation in the city had declined over time, a belief I had inherited from older generations and various sources. However, this notion turned out to be a misinformed perspective, which my professor aptly referred to as a "colonial mindset." By asserting that urban public transportation had declined, I unwittingly perpetuated the narrative that what the British had built during their colonial rule was superior to what we, as a post-colonial society, had developed, despite the significant Western influences on our own urban infrastructure.

Looking back, if I were to undertake this project anew, I would challenge the notion of decline more rigorously. I would seek to establish a comprehensive matrix or definition to evaluate progress or decline in the context of transportation. For instance, does the introduction of a new mode of transportation, like a Bus Rapid Transit (BRT) system that makes traditional wagons obsolete, represent progress or decline? Does the banning of other modes, such as rickshaws,

which provide affordable transportation options however are not friends of a clean air, constitute progress or decline? Or should progress and decline be solely evaluated based on supply and demand dynamics? However, such an extensive study would require more time and information access than I had at my disposal. Not only is there limited openly accessible recorded information, but there is also a substantial informal sector within public transportation that remains uncharted in this paper.

An example of this lack of accessible information became evident when I attempted to gather data on the wagon routes within Islamabad, the most widely used urban public transportation system in the city. Google Maps did not have route information for wagons, despite their significance. The city's website did provide PDFs of routes with associated fees, but these documents were challenging to decipher without accompanying maps. Wagon routes relied more on word-of-mouth information sharing. I attempted to send a family friend, Mohammad Mursaleen, to inquire at the stations, but the wagons were either on strike or temporarily closed for holidays during the limited windows when he was available to assist. Although this endeavor ultimately proved fruitless, it opened the door to another area of research: making this critical information available online and integrating GPS systems with wagon services. Nevertheless, this endeavor fell outside the scope of my skill set and potentially carried risks due to the political ties of the system, a topic I will discuss in detail later in this project.

During my brief visit to Pakistan, I explored various theses within the planning department of the University where I had previously studied, but found a notable absence of studies focused on transportation policies. The majority of the work revolved around technical aspects, primarily centered on creating new routes to serve underserved areas and analyzing traffic dynamics. It was clear that my research needed to pivot toward examining the policies governing urban transportation.

This preface serves as an introduction to my exit project, which is centered on understanding the intra-urban public transportation system in Pakistan, with a primary focus on the policies that shape it. My journey to address the gender disparities in accessing urban opportunities has evolved, and I am committed to exploring the intricate policy landscape that underpins our transportation network to pave the way for a more inclusive and equitable urban environment.

1. INTRODUCTION

I perceive urban public transportation as a tool for urban freedom, especially for the urban poor, marginalized individuals, and women.

I see it as freedom to be where they want.

I see it as freedom to do what they want.

And I see it as freedom to be who they want.

Accessible public transportation can have a significant impact on the daily lives of people in urban areas, particularly those facing economic disadvantages. Mobility is directly linked to financial freedom as it determines access to job opportunities and economic prospects (Rana, 2020). Similarly, mobility is intricately tied to the quality of life, enabling access not only to employment but also to education, healthcare services, and recreational activities. Women, in particular, are disproportionately affected due to limited access to economic resources and their dependence on family members for daily mobility (Law, 1999). Studies have shown that the lack of access to transportation system and a suitable mobility environment significantly decrease female access to basic services such as healthcare and education (NIPS, 2008). Moreover, most Pakistanis cannot afford to buy a car and are left with no choice but to rely on public transportation, which consistently fails to meet demand. The systems are also dilapidated, poorly maintained, highly crowded, unreliable, and unsafe.

In an equitable and sustainable city, everyone should have the right to access the opportunities offered by cities, and urban mobility plays a crucial role in this regard. Public transportation stands as a cornerstone of economic equality, financial emancipation and environmental responsibility. By providing affordable and accessible transportation options, it not only reduces economic disparities but also liberates individuals from the financial burdens of private vehicle ownership. This results in a reduction in the number of cars on the road, thereby contributing to a cleaner and more sustainable urban environment. Furthermore, its cost-effectiveness and role in enhancing employment accessibility create a ripple effect of economic benefits, including job creation and real estate development, reinforcing the fundamental principles of a just and thriving city.

2. METHODOLOGY

This essay employs secondary sources to explore the historical development and pivotal policies influencing Pakistan's intra-city public transport. The analysis involves scholarly works, official reports, policy documents, and relevant publications to establish a comprehensive understanding of the subject.

To depict a chronological narrative of urban transport policies in Pakistan, multiple timelines were constructed, aiding in contextualizing policy evolution and its long-term implications. The aim was to consolidate scattered information into a concise format to facilitate a foundational grasp of the subject before engaging in more extensive research.

Furthermore, a categorization framework was utilized to analyze and classify issues linked to these policies. Common themes such as inadequate funding, integration gaps, and land use were identified and supported with empirical evidence and real-world examples to strengthen the arguments presented.

Based on these analyses, the essay provides recommendations to the challenges of urban transportation in Pakistan. It's important to note that while the study's findings may align with trends observed in other developing nations, the focus of this paper remains exclusively on the Pakistani context.

3. LANDSCAPE OF PUBLIC TRANSPORTATION IN PAKISTAN

To comprehensively examine transportation policies, it is imperative to initiate our inquiry by gaining a thorough understanding of the current transportation options available to the public. This foundational section aims to elucidate the prevailing modes of transportation and the preferences that underpin them.

3.1. CURRENT MODES OF URBAN PUBLIC TRANSPORTATION

Intra-city public transportation in Pakistan encompasses various modes of travel. Among these modes, walking stands out as the most widely utilized means of transportation, highlighting the reliance on pedestrian movement within urban areas. Private cars rank second in terms of popularity. Buses, too, represent a significant mode of intra-city travel, catering to a substantial portion of the population. In contrast, taxis and bicycles remain less frequently utilized for commuting purposes. An examination of the data presented in Table 3.1.A. provides valuable insights into the prevailing patterns of transportation preferences within Pakistani cities.

Mode	Overall		Urban		Rural		Male		Female	
	n	%	n	%	n	%	n	%	n	%
Walking	103999	86.5	36610	79.9	67389	90.6	82696	86	21303	88.6
personal automobile	7626	6.4	5032	11	2594	3.5	6099	6.4	1527	6.3
taxi	2175	1.8	1109	2.4	1066	1.4	1551	1.6	624	2.6
train	56	0	31	0.1	25	0	47	0	9	0
bus	2500	2.1	1465	3.2	1035	1.4	2038	2.1	462	1.9
bicycle	2905	2.4	1306	2.9	1599	2.2	2838	3	67	0.3
other	912	0.8	257	0.5	655	0.9	842	0.9	70	0.3
Total	120173	100	45810	100	74363	100	96111	100	24062	100

Source: Author's calculations using Time Use Survey (2007)

Table 3.1.A Total trips by mode across Pakistan and gender

Source: Adeel et al. 2007: Gender, mobility and travel behavior in Pakistan: Analysis of 2007 Time Use Survey

3.1.1. Walking

Walking, the predominant mode of urban mobility, is often overlooked despite its significant importance. Astonishingly, a staggering 86.5 percent of the population relies on walking for their daily trips, whether out of choice or necessity. However, it is disconcerting to note that the individuals responsible for shaping transportation policies, both civilian and military, often view transportation from the comfort of their vehicles, disconnected from the realities of pedestrians. Transport activists call this 'windshield effect'. This lack of need for pathways contributes to underinvestment in pedestrian infrastructure, resulting in poorly maintained or nonexistent sidewalks. The neglect comes from not only the policymaker's limited experience of using or

needing pedestrian paths but also from their unwillingness to invest rupees in pavements because the cars they use are dependent only on roads.

It is no surprise that pedestrian paths and sidewalks are non-existent along most of the roads unless it's a luxury gated community. For the ones that do exist; they are poorly maintained; not wide enough for even one person to pass; are encroached upon or used to park cars.

Badami (2009) explains the case of a similar context, the neighboring country India where the pattern of growth of roads and road policies are also biased towards motor vehicles. He posits that such an attitude heavily impacts the poor. It exacerbates access, time loss, and road safety for other modes. Pedestrian accessibility is severely hampered when motorways and highways cause the low income to either take detours or risk their lives crossing roads with high speed traffic with no walking signals. Furthermore Badami notes that such discriminatory infrastructures restricts income groups access to short and medium distance trips, therefore, walking and other non motorized trips become necessary however are not cared for. When we look at cities in Pakistan, the rich and poor live side by side. When road infrastructure is put in place, it increases accessibility for those with cars but restricts it for those without one.

The World Bank's Global Walking Index in Figure 3.1.1 A offers valuable insights into the quality of pedestrian conditions, encompassing crucial aspects such as safety, security, and convenience in the pedestrian environment. It rates Pakistani cities with the lowest walking scores which underscores the insufficiency of safety, security and convenience for pedestrians in these cities. Addressing the neglect of pedestrian infrastructure is vital to creating more inclusive and pedestrian-friendly cities.

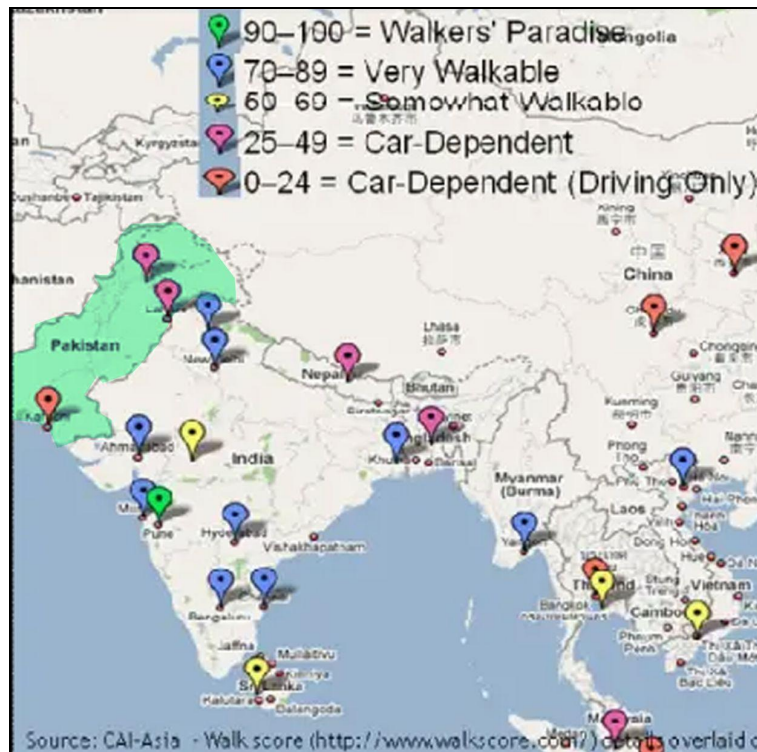


Figure 3.1.1 A. Snapshot of Walk Score
 Source: Sudhir Gota, 2010

3.1.2. Taxi/Cabs/Ride hailing services



Figure 3.1.2.A Source: Intelligent Transport

Taxis and ride-hailing services have revolutionized urban transportation, offering on-demand accessibility, enhanced security, and a more personalized experience.

Ride-Hailing services started in the 2010s to bridge the gap for safe and comfortable public transportation. They gained traction and popularity quickly. Pakwheels.com conducted a survey with 35,176 responders in 2018 that showed that 53 percent of the respondents used ride hailing services. Knowing that Pakwheels is a vehicle selling/buying platform, we can assume this number represents the upper and middle class of Pakistan who can afford to buy cars.

Careem was the first to introduce a ride-hailing service in Pakistan, followed by Uber and Bykea. Bykea was the first to offer motorbike rides to create an affordable service that reached lower income city residents. Careem entered into Pakistan in 2016 and at first, launched its services in Islamabad, Lahore and Karachi. Eventually, it expanded to many other cities across Pakistan including Abbottabad, Faisalabad, Multan and more (Pakwheels, 2018).

Careem's accessibility and security made them particularly appealing to women and middle-to-high income earners, but their affordability remains a key issue for lower-income urban residents. While they are a safe option for women, there have been reported issues of harassment (Farrukh,2019). Strict security and accountailty measures, targeted pricing strategies and partnerships with social service organizations could help bridge this gap and ensure equitable access to these transformative transportation services.

3.1.3.Buses and Wagons



Figure 3.1.3. A: Wagon, Suzuki and Bus in Pakistan
Source:Muhammad Adeel et al, 2009

Pakistani cities are served by bus or wagon based public transport, which offer a notably low level of service and comfort, as depicted in the photos above (Imran, 2009). These transportation options consist of various models, such as the Toyota 18-seater, Mazda 25-seater, Suzuki 71 and 12-seater wagons, among others (Imran, 2009). Imran's (2009) study indicates that even as a small percent (3.2%) of the urban population relies on this service, an even lower percent of

women (0.18%) ride these buses and wagons due to its overcrowded, unsafe and uncomfortable nature. These services are regulated by the government and follow fixed routes, but they may also stop at any point upon passenger request. They suffer from issues of unreliability, excessive delays, irregular frequency, inadequate route coverage, low profitability, substandard vehicle quality, poor safety standards and environmental concerns. While they are regulated by the city, they are very leniently controlled.

3.1.4. Rickshaw and Qingqi



Figure 3.1.4. A: Rickshaw
Source:Gari.pk



Figure 3.1.4.B: Qingqi
Source:Faiz Web TV

Rickshaw and Qingqi are privately owned low fare vehicles that have increased in number to fill the gap of required public transport. While they are ubiquitous in several urban areas, not all cities allow rickshaws and quinggi's in central areas. They were introduced in the 1960s and the earlier versions were non motorized, pulled by humans/animals. There is little academic scholarship on their structure and use. They were banned from Islamabad during the 60s as they polluted the air and were regarded as creating a poor image of the country by policy makers at the time. They are a popular means of transportation in most of Pakistan's urban cities. In 2016, to make ride hailing more affordable, Uber started operating Rickshaws too.



Figure 3.1.4.C : Uber Rickshaw in Lahore

Source: Dawn.com

3.1.5. Bus Rapid Transit (BRT)

The Bus Rapid Transit (BRT) system is the newest mode of transportation introduced in the country and it has significantly improved the transportation landscape, particularly for those who already use the bus system. It has garnered a substantial increase in ridership since its inauguration, marking a significant shift in public transport usage. BRTs are operational in 3 major cities: Peshawar, Islamabad and Lahore.

The first BRT was started in Lahore in 2013, followed by Islamabad and finally Peshawar. The Lahore BRT ridership reached its peak ridership of 10,000 in 2015 i.e. only 2 years after it opened. The daily demand (passengers per day) in 2023 for Lahore is 180,000 in a city of 7,132,000 people.

While BRT can travel on designated tracks and also in mixed traffic, the Pakistani BRT is solely run on designated tracks with massive stations. While these were not required of the service, the frills tied into a political show of power and winning votes.

BRT Ticket	Cost (PKR)	Year of cost	Provincial monthly minimum wage in 2023 (Source:Timedoctor.com)	Source
Lahore	15-25	2021	20,000	Nation.com
Islamabad	30	2022	20,000	Zameen.com
Peshawar	15-55	2023	21,000	app.com.pk

Table 3.1.5.A: BRT Bus ticket comparison with monthly salary

For an average citizen the ticket cost is affordable, the monthly cost of using BRT is on average 16% of their income (using the figures in Table 3.1.5.A).



Figure 3.1.5.A.: Bus Rapid Transport
Source: Faran Mahmood. 2018

The BRTs have recently started commuter buses that interconnect with Metro Bus stations. These are High-Occupancy Vehicles (HOVs) as well as Low-Occupancy Vehicles (LOVs) run by individual contractors licensed and permitted by the city (Zameen.com, 2021).

The chart illustrates the dominance of different transport modes over time. The 1940s and 1950s are dominated by horse-drawn carriages and steam trains. The 1960s and 1970s see the rise of buses, trucks, and private cars. The 1980s and 1990s are dominated by private cars. The 2000s and 2010s see the emergence of public cars and formal buses. The 2020s are dominated by informal buses.

Sources: Wikipedia, Sarah Cheema, Photo Archives of Pakistan, Samina Mirza, My Historical Pakistan Society, Faiz Web TV, Faran Mahmood, Muhammad Adeel et al., Gari.pk, Careem, Mohammad Imran.

In delving into the modes of public transportation in Pakistan, our focus transitions to the historical trajectories that have intricately shaped the transportation landscape. This exploration unveils the dynamics of growth and the evolving demands of the urban environment, laying the foundation for an in-depth analysis of historical contexts and policy frameworks that have molded the transportation paradigm.

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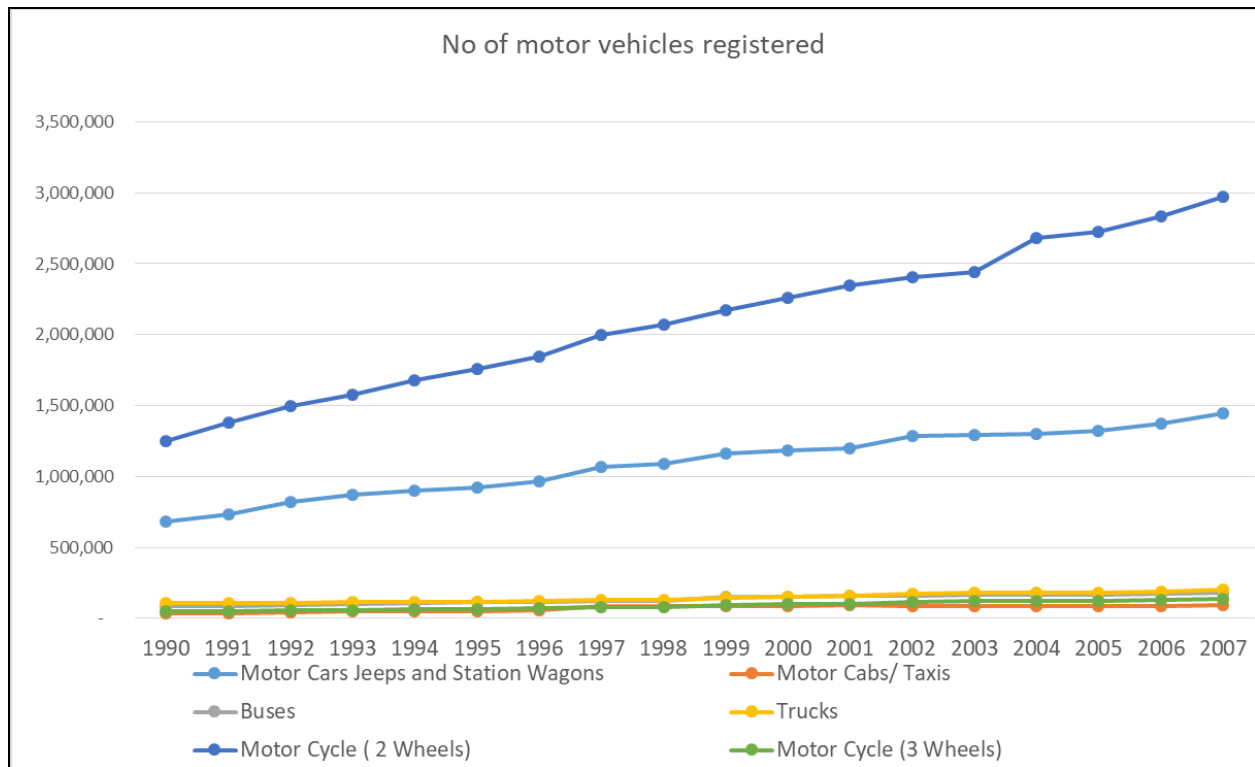


Figure 3.3.A: Number of Vehicles registered in Pakistan from 1990 to 2007

Source: Federal Statistic Bureau 2007

It comes as no surprise that people are increasingly inclined to purchase cars, as depicted in Figure 3.3.A. Unfortunately, this trend is becoming a cultural norm because people don't have many alternatives. They have witnessed decades of underperforming public transportation. The graph above Figure 3.3.A illustrates that the growth of taxis, buses and rickshaws has stagnated. However, it is interesting to note that motorcycles (two-wheelers) have experienced the most significant growth. They are the most affordable form of individual motorized transportation available. This is one instance that shows the need for affordable public transportation.

Item	1979-80	1980-81	1981-82	1982-83	1983-84	1984-85	1985-86	%Growth (1979-86)
Inter-City	804	685	564	480	462	425	379	52.9
Urban	372	388	355	404	403	426	441	18.5

Figure 3.3.B : Private and Public Sector Buses on Road in Punjab from 1979 to 1985

Source: Rahman, Habibur (1988), pg 18.

The table above shows that the growth rate of urban buses remained at a low 18 percent in the whole country from 1979 to 1986.

Traditionally, cities in Pakistan have grown with compact, mixed-use land use that was accessible on foot (Imran, 2010). However, as urbanization accelerates, Pakistan's cities are

expanding rapidly. Two-thirds of the country's urban population resides in just 10 major cities, while half of the population lives in urban areas (Adeel, 2014). As cities expand, distances increase and, consequently, the need for mobility also increases. Unfortunately, the availability of public transport has not kept pace with the population growth in Pakistani cities (Sohail et al., 2006). Habibur Rahman (1980) posited that the rate of growth in road infrastructure exceeded the population growth rate. Unfortunately the road development disproportionately encouraged the growth of vehicles that were for private use.

	Car ownership (Car per 1000 population)	Modal Split for journey to Work Trips (percentages)		
		Private Transport	Public Transport	Non Motorized Transport
Developing Countries Cities				
Lahore*	39	24	16	60
Karachi**	47	27	23	50
Mumbai***	21	9.3	40.9	49.8
Bangkok	199	60	30	10
Jakarta	75	41.4	36.3	22.3
Kuala Lumpur	170	57.6	25.5	16.9
Developed Countries Cities				
Singapore	101	21.8	56	22.2
Hong Kong	43	9.1	74	16.9
Melbourne	518	79.4	15.9	4.7
Perth	523	86.2	9.7	4.1
Toronto	606	64.6	30.1	5.3
Vancouver	564	81.9	12.4	5.7
Zurich	444	36	39.8	24.2

Source: Kenworthy et al. (1999)

Note: Kenworthy et al. 1999 data refers to 1990 figures

- * **Lahore** Car ownership data was calculated from Census (1998) and Shigeta (2002) and refers to 1998 figures; Modal split data was obtained from TEPA and JICA (1992) and refers to modal split for total trips in 1991.
- ** **Karachi**-Car ownership data was calculated from Census (1998) and Malik (2006) and refers to 2006 figures; Modal split data was obtained from Malik (2004) and refers to 1990 figures.
- *** **Mumbai**-Car ownership and modal split data was obtained from Low and Banerjee-Guna (2003) and refers to 1995 figure; modal split data refers to total trips.

Figure 3.3.C: Comparison of modal split and car ownership between developing and developed cities
Source: Mohammad Imran. 2010, *Institutional Barriers to sustainable urban transport in Pakistan*

Dr. Rana (2020) explains that mobility gaps reflect socio-economic differences. Access to individual transportation is largely determined by income. Based on this statement, it can be expected that this gap will widen as cities continue to expand. Adeel et al. further explain that as cities grow, prices rise and make the urban environment harsher to live in. Affording a car becomes increasingly difficult. Car ownership statistics support this claim, with only 17 vehicles

per 1,000 people in Pakistan (Dr. Rana, 2020). Comparing this figure with global statistics of number of vehicles per 1000 people in Figure 3.3.B, it becomes evident that Pakistan is not a car-dependent country. Figure 3.3.B also shows that in 1999, 60 percent of work trips in Lahore and 50 percent in Karachi were made using non-motorized transport.

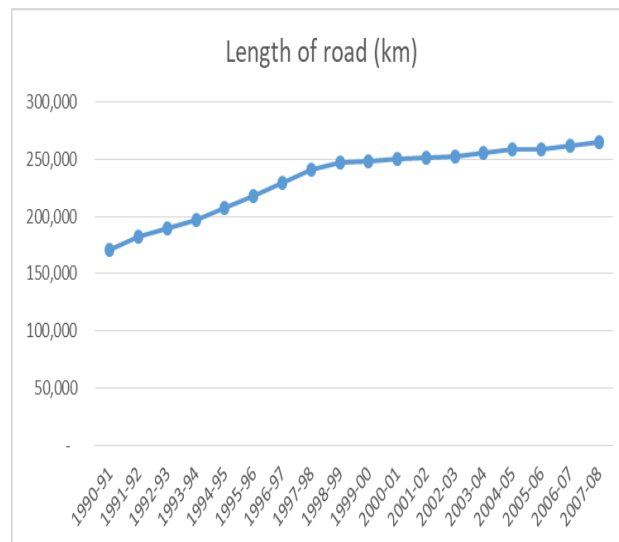


Figure 3.3.D: Total length of roads in Pakistan-Yearly. From 1990 to 2008

Source: Statistic Bureau of Pakistan

The focus however still remains on building more roads, as depicted in Figure 3.3.C. There is a constant increase in road infrastructure with a steep gradient from 1990 to 1999. However as shown in Figure 3.3.A, public transport vehicles only show stagnancy. Badami talks about this focus on roads as a part of “discriminatory transport policy and planning,” where one mode of transportation i.e. motor vehicles is given more focus than others. While great for motor vehicles, it hampers movements for pedestrians and cyclists. It exacerbates access, time loss and road safety for other modes. Pedestrian accessibility is severely hampered when motorways and highways cause the low income to either take detours or risk their lives crossing roads with high speed traffic and no walking signals. Furthermore Badami says that such discriminatory infrastructures restricts low income groups to have access to short and medium distance trips. Therefore, for this group, walking and other non motorized trips become necessary.

We discussed in section 3.2 that Pakistan is not a car dependent country and has a large dependency on non motorized modes of transportation. However a summary of trajectories show an increase in road infrastructure and private motorised vehicles while stagnancy in public road infrastructure. In the next section we can delve into policies and see why these trajectories were happening.

4. DISSECTING URBAN TRANSPORTATION POLICIES OF PAKISTAN

The first point of departure in almost all literature that talks of the poor conditions of urban public transport, from Mohammad Imran to Habibur Rahman, starts from the topic of policy formulation. Policy indicates the economic and social values of the governing systems. In addition, it has the effect of a stimulus that can generate change in the urban fabric. Imran (2010) furthers this point when he argues in his book that policy discourse is the prime vehicle for change.

To provide a comprehensive policy context, a timeline of key policy events is presented below. After familiarizing ourselves with this policy context over 70 years of development, we then can delve into various aspects such as policy details, finances and investments, international, national, and local politics, land use planning, and institutional capacity – all of which shape and condition urban transportation conditions.

4.1. A TIMELINE OF MAJOR URBAN TRANSPORTATION POLICIES

Modes	Institute/Program/ Taskforce	Policy
1940s 1947: Independence Inherited the railway system	1950s 1955-60 : 1st Five year plan 70: 30 budget divide Rail: Road KTRC procured 500 buses for urban public transportation	1960s 1960-65: 2nd Five Year Plan Priority Given to Roads – budget and expansion Encouraged the private sector to come forward and run road based public transport due to increased demand and pop growth KTCR procured 700 buses for urban transportation Lahore circular railway project proposal for urban passenger mobility not accepted
1951 -Road Transport Board was established in Punjab to provide adequate public transportation service. 1959 -Karachi Road Transport Corporation (KRTC) was created- oversee bus based public transport	1970s Public transport deregulated	1980s PTTC tried to attract private sector by starting a leased buses scheme on specific routes run and managed by the private sector Due to lack of investment, new buses were not purchased after 1989
Tonga (Horse ridden Carriage) Omni Bus (Double Decker)- Karachi and Lahore Tramway	500 buses procured for Karachi 700 buses procured for Karachi Private wagons entered KCR (Karachi Circular Railway) to include passengers Tramway abolished 350 Volvo buses were gifted by the Swedish government to Lahore	1977: Punjab Urban Transport Corporation (PUTC) established to provide urban public transport services: Provide bus stands, bus maintenance and manufacture PUTC developed its own maintenance and body building workshops, central stores, offices, and a central transport training institute. public-owned Omni Buses were merged into PUTC PUTC and the Volvo International Development Corporation completed a study for the Model Urban Transportation Awami (People's) Bus Train, was started in 1989 by Mr. Bhutto's first government in Karachi, Rawalpindi, and Islamabad (prime mover plus three trailers) shut down due to lack of interest

1990s

1991: a draft National Transport Policy was published by the National Transport Research Centre (NTRC); proposed that government responsibility should be limited to low-income groups by providing a sufficient number of subsidized public transport services. It was not accepted but rather discouraged on the basis that low-quality public transport in urban areas would convey a negative image of government-owned transportation. Steps were proposed to encourage the involvement of the private sector, including soft loans from banks, a reduction of custom duty, and tax incentives for the importation of vehicle spare parts

1991: Prime Minister's Public Transport Scheme, 1991: incentive packages to import taxis, buses, and mini-buses. Duty free imports and loans. Lasted till 1993

TS&D policies: privatization and deregulation heavy

1999 National Transport Strategy: , a franchise system of bus operation was introduced to run bus-based public transport. Therefore, favorable policies, tax incentives, and regulations were formulated to attract the private sector to invest. Government encouraged commercial institutions and banks to cooperate with private investors

Punjab transportation Dept: Same franchising policy: subsidy on the interest of loans, exemption of customs duty on the import of Compressed Natural Gas (CNG) and diesel buses, and subsidized lease of depots.

1991: A mass transit mega-project project was proposed in collab with Japanese International Cooperation Agency's (JICA) in a comprehensive study of the transportation system in Lahore. This was a light rail based proposal. It had insufficient funding even though Japan was willing to give a loan of 1.4 bill and political party changes

1993: world bank updated the study by JICA and showed need for LRT

1998: PUTC public bus system collapsed, government disbanded the PUTC

1997 : Faisalabad Urban Transport Society (FUTS) was created in 1994 followed by the Lahore Transport System (LTS) in : NGOs to run public transport services

With funding from private operators (reason for decline)

P3 - regulated by the law of social companies and administered by a governing body

1999: The Transport Sector Development Initiative (TSDI) was a joint effort among the Government of Pakistan, international development institutions (especially the World Bank), and the private sector to collectively develop a comprehensive transportation policy

1999: the National Transport Strategy was developed by the Small and Medium Enterprise Development Authority (SMEDA), under the Federal Ministry of Industries and Production

1996: The People's Train and Awami (People's) Bus Train Projects: rail-road mixed mode b/w Rawalpindi and Islamabad: Rail and Mini buses (feeder coasters)
Franchised buses in Punjab and Islamabad

2000s

Franchising operations in the cities of Rawalpindi and Islamabad ended in early 2000

Federal Planning Commission

prepared a draft Transport Policy: First to propose reserving special bus lanes at grade or grade-separated road infrastructure

encouraged revitalization of the KCR as an urban rail line

2003: National Transport Policy with ADB: this document was silent on the assessment and development of public transport

2010s

2021: TS&D: Privatization and deregulation heavy

2010: Punjab Government decides to build a BRT in Lahore

Largest investment in public transport

2013: Gov. plans to build a BRT in Peshawar

2020s

2013: BRT in Lahore
BRT in Islamabad/Rawalpindi

2021: Expansion of BRT and provision of Feeder Buses in Islamabad

4.1.1.SUMMARY OF MAJOR URBAN TRANSPORTATION POLICY

Upon independence, Pakistan inherited a British-built intercity railway system and a reliance on Tongas, Buses and Tramway for public transportation. The First Five-Year Plan shifted focus to road building and established the Road Transport Board in Punjab and Karachi Road Transport Corporation (KRTC) for public bus services. This was established even though Pakistan was not a motorized vehicle oriented society and meant importing cars. The Second Five-Year Plan continued prioritizing roads and encouraged private sector involvement in public transportation due to growing demand.

In the 1970s, public transportation was deregulated and many institutions were formed to facilitate private sector participation. The tramway was abolished in Karachi to prioritize road infrastructure. In the 1980s, efforts to privatize public transportation intensified through bus leasing schemes, but interest was lacking, and bus purchases halted after 1989.

The 1991 draft National Transport Policy proposed government involvement in providing subsidized public transport for the low income population, but it was discouraged due to concerns about conveying a negative image of poor quality government-owned transportation. The 1990s continued encouraging private investment through soft loans, low import taxes, tax incentives and franchising schemes. However, the Punjab Urban Transportation Corporation (PUTC) bus systems collapsed in 1998 due to lack of maintenance and investment. Transportation Studies at the time recommended light rail development, but little attention was paid.

By the early 2000s, franchising operations in Rawalpindi and Islamabad ended, but plans for bus lanes emerged. The revitalization of KCR was considered, but the 2003 National Transportation Policy remained silent on public transport development. The implementation of BRT in 2010 marked a significant step forward.

4.1.2. LACK OF FUNDING

Throughout the history of urban transportation in Pakistan, the biggest challenge has been lack of funding and investment. Many reasons explain this lack of funding, as I describe below.

4.1.2.1. PATH DEPENDENCE IN POLICY MAKING

Transportation policy has been central for the government to define and promote certain modes of transportation over others. A look into the history of transportation policy making in Pakistan, it is more than evident that the provision of private cars and road infrastructure has always taken precedence over public transport, starting with the first two development plans of the country in

1955 and 1960. Imran (2009, 2010) convincingly argues that these early policies were the trigger to the path of heavy and consistent railway disinvestment and road investment in all plans that followed.

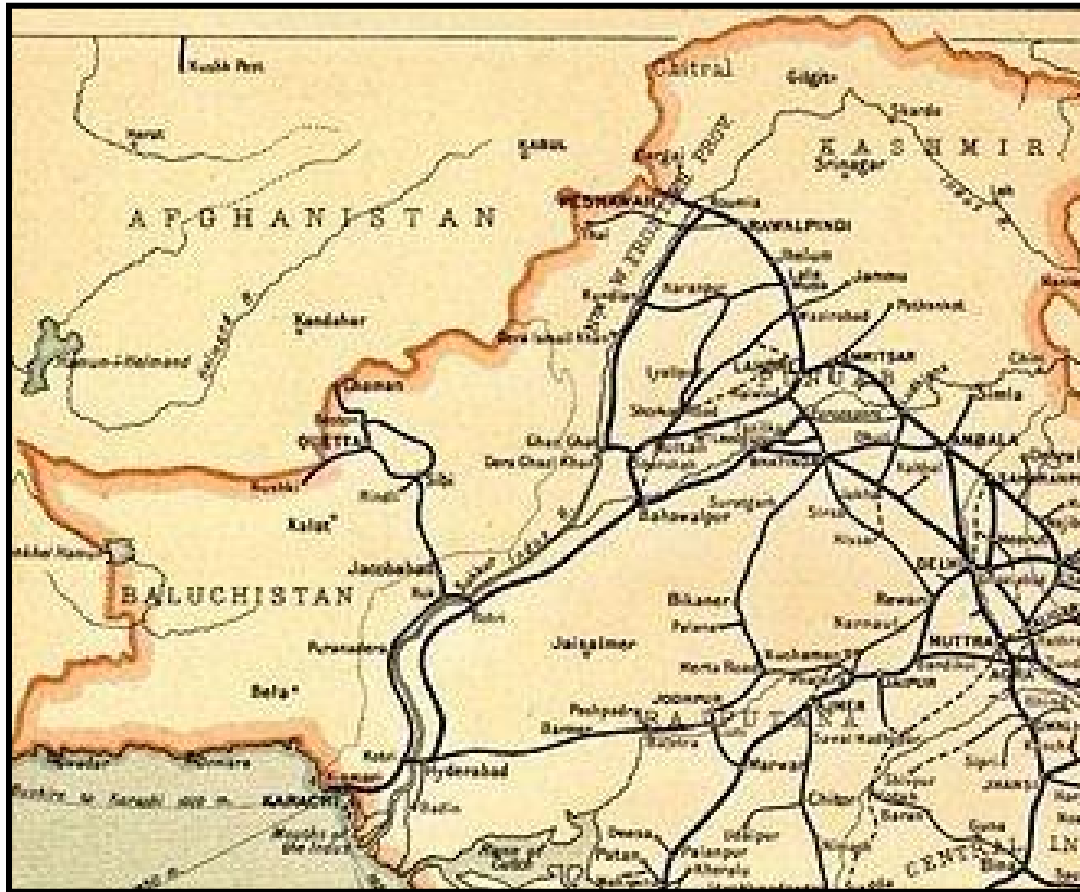


Figure 4.1.2.1.A: British India Railway general map 1909.

Source: Environment & Society Portal

To give some additional context, Pakistan gained independence from British colonial rule in 1947 and inherited an extensive “self-sufficient” Railway system that was the backbone of the country (Imran , 2010). This system connected all the major cities and extended enough pre independence to link with the neighboring countries of Iran, India and Afghanistan. I assume this self sufficiency meant financially self-sustaining. However this aspect should be taken with a grain of salt. Around 1853, most of the raw materials for making this railway came from massive deforestation of indigenous lands. Coal industry was not fully developed so this wood was used to fuel the system too. The financial accounting of the system does not take into account the environmental impact in its consideration. Similarly it also does not take into consideration the financial damage of deforestation that led to unwarranted spells of flood and drought, disruptions in systems of irrigation and food production, heightening the fear of social unrest and revolt (Vandana Swami, 2003) . While the railroads were significant in connecting markets and providing new mobilities, they also came at a huge cost that should be remembered.

international institutions that it lacked the capacity to create these plans; plans for the growth and the development of the country. These international groups included the UN, UN FAO, the Colombo Plan Organization, US government and the resident representatives of World Bank (Imran 2010).

In 1952, the Pakistani government and the aforementioned international institutions enlisted the help of Harvard economists to assist in the development of the country's first development plan. This is the time America was heavily investing in automobiles and automobile industries. Pakistan, however, was heavily relying on railways. As a result, the document reflected an American bias for automobiles and inculcated disinvestments from the existing railway infrastructure (Imran 2010, Adeel 2007) . Imran explains that the main reasoning provided behind the disinvestment was for the need for Pakistan to stay up to date with the trends of the modern world and that roads allowed for flexibility. This is deeply problematic in hind-sight, given that Pakistan's transportation industry was predominantly rail-based or non motorized. Further, there was no link to the industrial development of Pakistan either i.e. for example as Imran explains that there were no efforts made to build out an automobile producing industry leaving the country reliant on U.S and other foreign. imports.

With this policy, a significant portion of railway transport funding was diverted towards the construction of roads and highways, without due consideration for local needs. In 1947 the funding was supposed to be 90:10 but the first development plan shifted funding to 70:30 for rail and road respectively (Imran, 2010). The following graph 3A illustrates the weight of funding allotted to each of the two sectors over the subsequent five-year plans. A strong pathway for decision making with a bias towards roads was thus created. After the international consultants left, the policy makers continued to not only make the same choices but also to amplify them further. Pakistan continued to see more disinvestment in rail to enable steady increases in road infrastructure budgets.

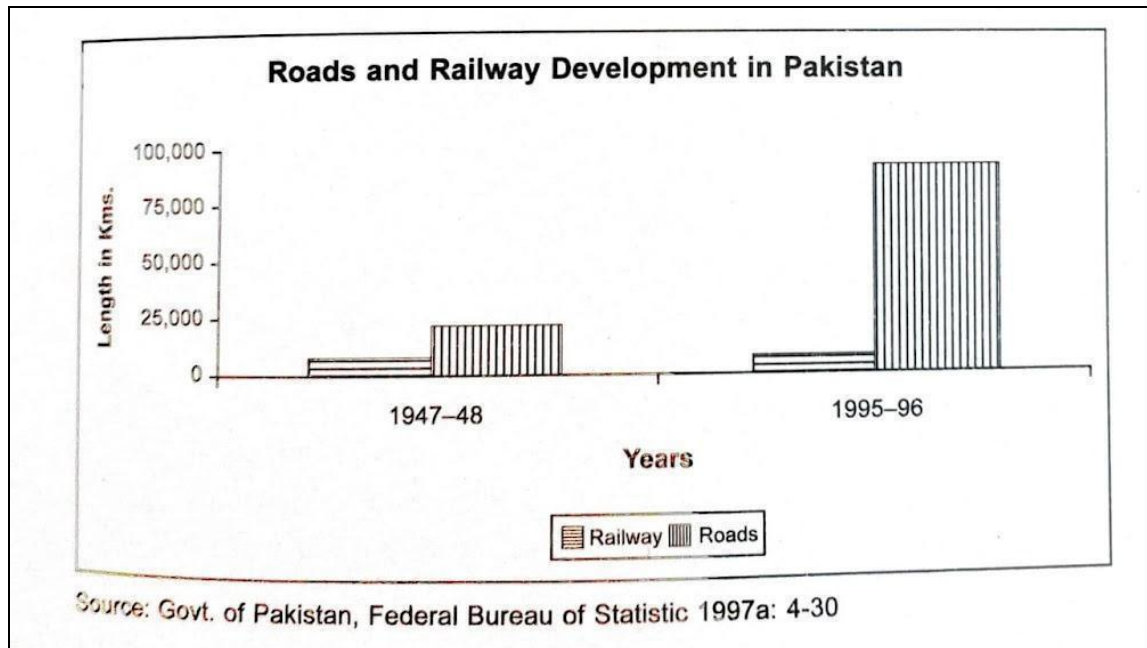


Figure 4.1.2.1.C : Comparison of Railway vs Road expansion from 1947 to 1996
Source: Muhammad Imran, 2010

We can see in Figure 4.1.2.1C that rail expansion became stagnant while road infrastructure boomed. This led to the depletion of funds that ultimately increased our reliance on loans and grants.

4.1.2.2. INTERNATIONAL INSTITUTIONS

International institutions have played a significant role in shaping transportation policy in Pakistan through consultants and capacity building as well as through foreign direct investment funding support. According to the International Metropolitan Transportation Systems Institute (IMTSI), transportation investments are arguably the most significant determinant of urban spaces and development patterns. Over the course of its recent history, Pakistan has created multiple institutes and programs that work to attract more foreign investment, that all came with strings and attached conditionalities

Once the US and Harvard trained consultants for the first development plan left, why did Pakistan still stay on the same path of budget and effort allocation? While one of the reasons was consistency and another was imparting road biased knowledge to local decision makers, the third was foreign aid with attached conditionalities. Path dependency towards building more road infrastructure was also propelled by foreign aid. The graph 4A shows this in detail, where a

comparison is conducted between funding received from foreign entities, against total budget for rail and total budget for roads.

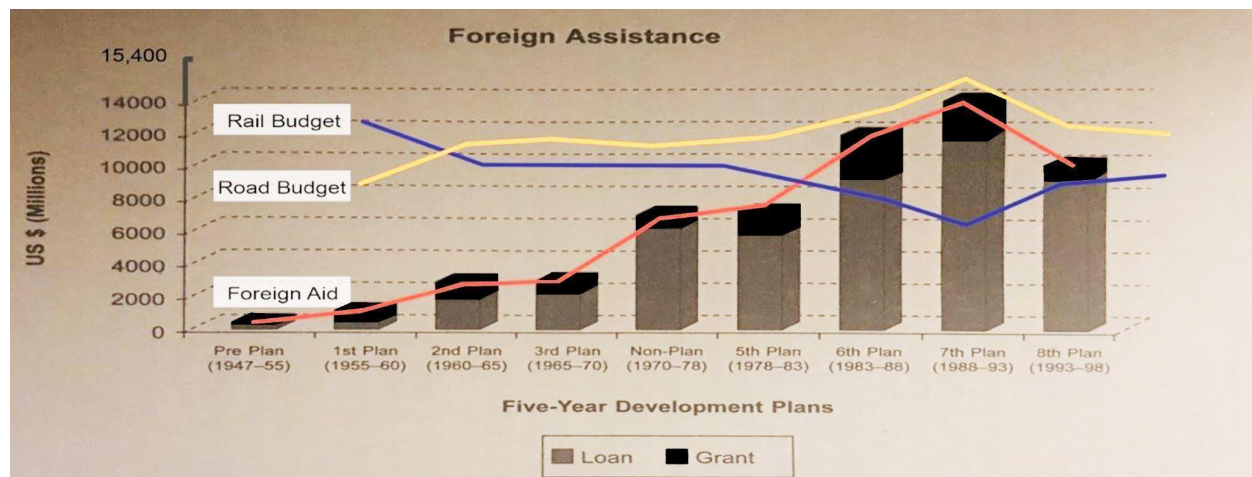


Figure 4.1.2.2.A: Budget allocation and Foreign aid (Grants and Funds) in Pakistan from Pre Plan to 8th Development Plan.

Source: Imran, Mohammad. 2010. *Institutional Barriers to Sustainable Urban Transport in Pakistan*, Oxford University Press.

Imran's analysis suggests the strong influence of foreign aid on favoring road infrastructure budgets. As the road budget increases, a similar increase in foreign aid is also followed. In addition, we can also see that the lower the rail budget goes, the more the foreign aid is. We see a peak in foreign aid during the 7th Development Plan where the Rail budget is the lowest and the road budget is the highest. Muhammad Imran argues that international institutions like ADB and the World Bank were not keen on providing aid if rail based projects were proposed, however very keen when road projects were.

In addition to this, we also observe from Figure 4.1.2.2.A that in the initial development plan periods, we were using our own money. Steadily we decreased that practice and started depending on grants and loans. These grants and loans overtime became more loans than grants. The difference between grants and loans is that grants are a gift, they don't need to be returned but loans do, that too with an added interest. This means that as time passed, more loans needed to be repaid. This meant that the nation needed to invest in projects that created profits. Speaking from a strictly direct profit making perspective, it might seem unwise to invest in public transport, looking at how in the history of Public transport, no public owned and operated transportation project has been very profitable.

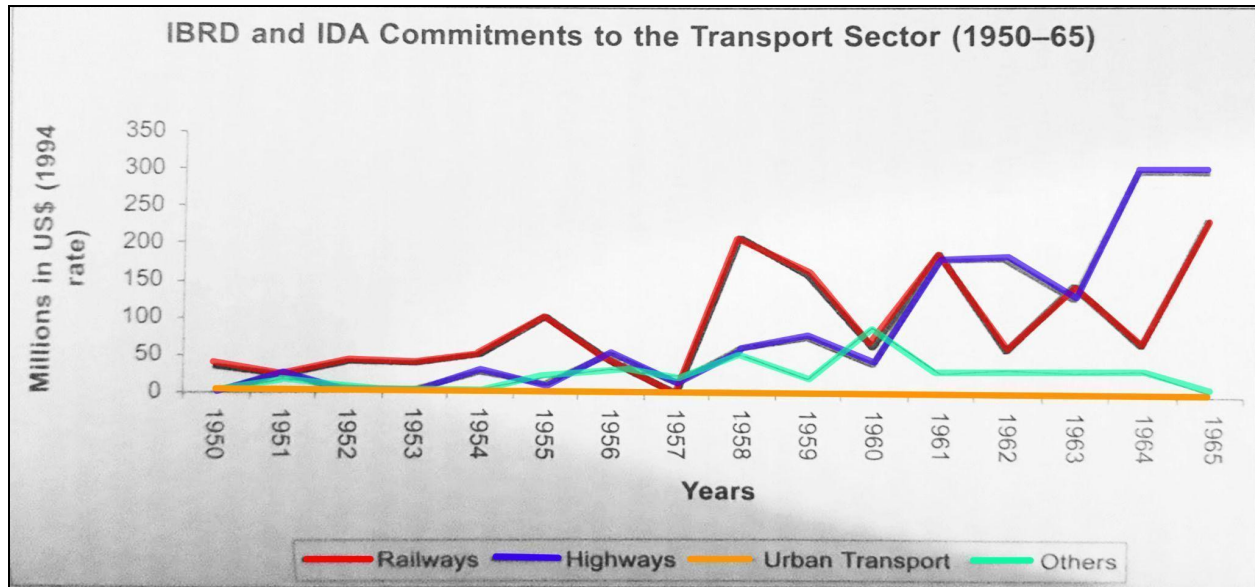


Figure 4.1.2.2.B: Budget allocation to different modes in Pakistan from 1950 to 1965.

Source: Imran, Mohammad. 2010. *Institutional Barriers to Sustainable Urban Transport in Pakistan*, Oxford University Press.

Our policies, investment strategies and budgetary processes show our political, economic and social values. We can see in the graph 4B above, where the priority of Urban public transportation was.

4.1.3. UNREALISTIC HOPE IN PUBLIC PRIVATE PARTNERSHIP

The emphasis on privatization of transportation systems in Pakistan has also been evident in all transportation documents prepared in collaboration with international development institutions (Imran, 2009). The term privatization in this context refers to the government's will for the private sector to own, operate, maintain and in some cases finance public transportation. The modes they wished to procure for this endeavor were buses and vans; however the provisions and policies were not long lasting due to lack of private sector investment. Habibur Rehman explained in his book that profitability was limited in these ventures. Moreover, the current public transport service and infrastructure have struggled to attract private mode users, while public mode users have faced numerous issues related to comfort, convenience, and safety (Irfan, 2013).

Since the 1970s, privatization and deregulation have consistently formed part of urban transportation policy. The government of Pakistan has repeatedly attempted to delegate the responsibility of urban public transport to the private sector, showing reluctance to assume the responsibility itself. This reluctance stems from the concern that owning low-quality public vehicles would make the government look bad (Imran, 2010).

A significant reason for lack of investment is the country's lack of institutional capacity, hindering its ability to effectively manage and resolve conflicts associated with franchised bus operations (Imran, 2009). Privatization requires a strong legal and regulatory system for any success. The example of the failed Punjab Urban Transport Corporation (PUTC) is illustrative.

PUTC was established in 1977 with the role to provide an adequate urban transportation system with amenities like bus stops etc. as well as to manage, maintain and repair the system across the entire province of Punjab, and its major urban centers like Lahore. The institute developed workshops, a central training institute, stores and offices. However it was always short on buses even after having Omni double decker buses and Volvo buses added to it. In the 80s PUTC tried to attract the private sector by starting a leased buses scheme on specific routes run and managed by the private sector but adequate investment did not come. No new buses were purchased after 1989 and in 1998 the PUTC system collapsed.

The 90s saw a large inclination towards privatization in many forms. One of them was the 1999 National Transport Strategy, which offered a different approach than the past. It offered incentives for investing in a bus franchising system. A similar policy was also drafted by the Punjab Transportation Department. They even gave incentives of subsidized loans and subsidized bus depots. However after a decade the franchising operations ended due to lack of investment from the private sector in Intra city transportation.

Item	1979-80	1980-81	1981-82	1982-83	1983-84	1984-85	1985-86	%Growth (1979-86)
Inter-City	804	685	564	480	462	425	379	52.9
Urban	372	388	355	404	403	426	441	18.5

Figure 4.1.3.A: Comparison between growth of Buses on Road from 1979 to 1986 in Pakistan

Source: Rahman, Habibur (1988), pg 18. Private and Public Sector Buses on Road in Punjab from 1979 to 1985

Figure 4.1.3.A highlights a noteworthy trend during the late 1970s to 1986, where a shift towards privatization-oriented policies resulted in a marginal increase in urban transportation buses, while inter-city buses experienced substantial growth (Rahman, Habibur, 1988) (Imran, 2010). Notably, urban transportation witnessed a modest 52.9 percent increase, whereas the public sector observed only an 18.5 percent rise. Habibur Rehman contends that the profitability of intercity bus operations surpasses that of intra-city transportation, contributing to this trend.

Presently, private operators largely dominate urban transport services in Pakistan, albeit in a limited capacity. These operators commonly employ low-cost vehicles with minimal user amenities. However, the government has grappled with challenges in regulating fare structures, route licensing, standardizing vehicles, and overseeing the quality and efficiency of the public transport system (Imran, 2010).

Another factor contributing to limited investment appears to be competition. Policies and schemes, open to any private entity, foster a competitive environment. However, in a scenario of low profitability, heightened competition might deter potential investors. One potential solution proposed is the designation of a single private entity per city to hold a complete monopoly over the public transport system. Such a monopoly could ensure a more stable stream of profits, albeit requiring stringent regulation by the city.

In summary, Pakistan's urban transportation history illustrates a recurring emphasis on privatization. However, challenges have arisen due to insufficient investment and institutional capacity. While privatization isn't inherently problematic, creating an environment conducive to successful public-private partnerships is crucial. Such environments necessitate efficient and timely legal frameworks to resolve conflicts. Prioritizing private investors' access to courts and instilling confidence in the system are essential. Addressing these issues mandates comprehensive reforms, including enhanced governance, investment strategies, and quality monitoring to establish a sustainable and effective urban transportation system.

4.1.4. PRIVATE VEHICLES AND ROAD CONSTRUCTION OVER PUBLIC VEHICLES

When analyzing the history of urban transportation in Pakistan, it becomes evident that public transport was consistently sidelined in favor of road infrastructure, leading to a stronger bias towards private vehicle traffic in planning decisions.

The success of Karachi's tramway system can be observed through its growth in the number of tram cars from 37 in 1918 to 157 in 1955. However, the tramway was eventually closed in the 1970s. Arif Hasan et al. (2015) highlight two reasons for its closure. Firstly, it caused traffic congestion on main corridors with an increasing number of cars. Secondly, it conflicted with the new Karachi Master Plan of 1975-85, which proposed the development of a mass underground transit system along the tram's route. Unfortunately, the planned mass transit system was never realized.

The government of Pakistan established the Public Sector Development Program (PSDP), responsible for fund allocation and public sector development plans. In the early 1990s, Nawaz Sharif's government diverted the funds allocated for public transport in the PSDP to build the national motorway, a non-urban transport project. Additionally, public transport incentives were also withdrawn under Nawaz Sharif's government (Imran, 2010).

In 2000, the federal planning commission presented a policy draft called Transport Policy. The recommendations in this draft aimed to remove paratransit vehicles from the roads to create more

space for cars and public transport. However, this approach would have resulted in the removal of the main mode of transport affordable for the urban poor (Imran, 2010).

The 2003 National Transport Policy, developed with the assistance of the Asian Development Bank (ADB), failed to address the assessment and development of public transport adequately. Furthermore, the medium-term development plans from 2005 to 2010 did not allocate any funds to public transport or non-motorized transport in major cities.

In conclusion, throughout the history of urban transportation in Pakistan, public transport was consistently overlooked and underfunded, while private vehicle traffic and road infrastructure gained prominence in planning decisions. The closure of successful tramway systems, diversion of funds from public transport to non-urban projects, and neglect of affordable transport options for the urban poor highlight the biased approach towards private vehicles. It is crucial for future policies and plans to prioritize and invest in sustainable public transport systems that cater to the needs of all segments of society.

4.1.5. THE IDEA OF ‘IMAGE’

Time and time again, the Pakistani government has demonstrated its inclination towards prioritizing appearances and the image of the government when it comes to public transportation.

A notable example can be seen in the national transport research center transport policy of 1991 and 1992. In this policy, the responsibility for providing adequate subsidized urban transport for the low-income class was initially assigned to the government's public sector. However, this proposal faced criticism as it was believed that low-quality public-owned transport would project a "negative image" of the government. Consequently, there was a push to delegate this responsibility to the private sector (Imran, 2009, Adeel, 2009). In their belief the negative image hampered the modern image they wanted to portray to the foreign eyes especially to keep foreign aid flowing.

Furthermore, the banning of Qingqi/Rickshaws and tongas in the capital city as well as tongas in major urban cities was also due to the image factor too. The government focuses on image rather than addressing the transportation needs of the urban poor. This ban deprived the urban poor, who accounted for more than half of the population in 2004, of affordable transportation options (UN Habitat Report, 2004).

The BRT project, considered the first major investment in urban public transport in Pakistan, was initially chosen due to its inherent low cost and rapid design. However, during the construction of the BRT system, large overhead bridges, extensive stations, and road widening components

were added, significantly increasing the cost. The opposition party criticized the design, labeling it wasteful due to the inclusion of superfluous elements (Fizzah Sajjad et al., 2022). This emphasis on visual aspects over functionality once again reflects the government's intent to create a modern image for the Pakistani public sector.

In conclusion, these examples highlight the government's tendency to prioritize image and aesthetics over addressing the pressing transportation needs of the population. This approach often leads to decisions that may not align with practicality or affordability, ultimately impacting the effectiveness and accessibility of public transportation in Pakistan.

4.1.6. POLITICS & MAFIA

Politics play a significant role in shaping the fate of public transportation systems at various levels. This chapter explores three projects/policies to highlight the influence of politics in either establishing or dismantling a public transportation system.

At the local level, the Karachi Circular Railway (KCR) was initially designed in 1964 for transporting goods but eventually began serving passengers as well. The train covered a distance of 44 km, passing through densely populated residential areas. The KCR witnessed a substantial ridership of approximately six million passengers per year. However, due to insufficient maintenance, the service started losing money, and it was eventually discontinued in 1999. According to Arif Hasan et al. (2015), the decline of the KCR can be attributed to alleged political pressures from the "transport mafia" in Karachi. According to Hassan, this particular transport mafia consists of bus, wagon and rickshaw owners that transported passengers through the same route as KCR did.

These informal influences reportedly prevented the government from upgrading the KCR while concurrently developing bus routes that ran parallel to the KCR corridor, leading to its demise. This resulted in more ridership for wagons and buses on the parallel route.

On the national level, the Lahore Bus Rapid Transit (BRT) project exemplifies the impact of changing political regimes on ongoing projects. The policy for the BRT's inception was formulated in 1991 during Nawaz Sharif's tenure. However, it was not until his re-election in 2010 that the government decided to initiate the construction of the BRT system. Unfortunately, as political leadership changes, projects face delays and stagnation in its implementation (Fizzah Sajjad, 2022).

Even at the international level, politics can influence the fate of urban transportation projects. As discussed in the chapter on lack of funding, international institutions often utilize foreign aid as a means to exert control and influence over the development of transportation infrastructure.

In conclusion, politics permeates all levels of urban transportation systems, and the case studies presented in this chapter demonstrate how political dynamics can either foster the growth or contribute to the downfall of public transportation projects. Understanding the complexities and interplay of politics is crucial for implementing sustainable and effective transportation policies and initiatives.

4.1.7. LACK OF PROPER MANAGEMENT CAPACITY

It was discussed in the last chapter that over the course of Public transport history, Projects have not been very profitable. In a critical overview it was found that many of the projects failed due to poor management of the projects. Maintenance goes hand in hand with operations in a transportation project to keep the cash flow generating.

The Karachi Circular Railway (KCR) was made operative in 1964, mainly for the transportation of goods. Because the 44 km train ran through several dense residential areas too, the train soon started taking on passengers. Approximately six million passengers used this facility per year (EMC 2009). The project was successful (Imran 2009) for the first 15 years. In the mid 90s, lack of maintenance caused it to lose money. In 1999 the service was stopped. Mohammad Imran states that there was not enough investment for the maintenance of the rail. Arif Hasan et al. states that there were allegations that the lack of maintenance was propagated by Karachi's transport mafia who wanted to keep ridership along the KCR routes for their buses and wagons. The allegations are based on the fact that the government spent money developing bus routes parallel to the KCR corridor instead of the rail itself. There have been attempts to revive the project but with no luck so far.

The Awami bus train was another successful project that declined without any legitimate reason other than lack of interest from the government. The bus train was a prime mover with three trailers to provide high capacity initiated by Benazir's government in 1989. Mohammad Imran states that the project attracted a large ridership during 1991 to 1993 i.e. Nawaz Sharif's reign. The project had received 68 percent of its costs from fares in 2 years yet it shut down soon after. In all literature, it is stated that the project failed due to lack of government interest. It is speculated that the lack of interest was due to political party change. Nawaz Sharif is known for his work in transportation especially motorway projects. To have a competitor's name on a success story and that too of a transportation project does not gain Nawaz any political points.

Punjab Urban transport corporation PUTC was established in 1977 with the role to provide an adequate urban transportation system with amenities like bus stops etc. It had the task to provide, manage, maintain and repair the system in Punjab. The institute developed workshops, a central training institute, stores and offices. However it was always short on buses. The story of PUTC is another one where lack of investment caused buses to be overburdened and overused. Lack of

maintenance led to the disbanding of the institute in 1998. Mohammad Adeel et al argue that to attract private investment, institutional capacity and management capacity is crucial.

4.1.8. LAND USE

Traditionally, cities in Pakistan were characterized by compact, mixed-use land use, enabling easy accessibility by foot (Imran, 2010, Badami, 2009). The densely populated nature of these cities facilitated movement and minimized the need for motorized transport. However, as cities expanded, particularly with the emergence of suburban low-density sprawl, the demand for transportation grew. In the absence of an efficient public transportation system, policies should aim to reduce the need for excessive motorized transport. Unfortunately, land use policies in Pakistan have been inconsistent and unclear.

In 1998, a transport policy initiated by the Chartered Institute of Transport aimed to integrate land use with transportation to alleviate congestion. It allocated more land for urban transportation infrastructure and implemented zoning plans. However, this approach created contradictory outcomes. Zoning plans, which segregated different functions (residential, commercial, administrative), increased the need for transportation for each specific task. In contrast, an integrated and mixed-use approach would have mitigated the need for extensive transportation, as multiple tasks could be accomplished within proximity, reducing the reliance on long trips.

The medium-term development plans from 2005 to 2010 failed to allocate sufficient funds for public transport and non-motorized transport in major cities. While these plans did emphasize the integration of land use and urban planning, they once again advocated for zoning, which perpetuated transportation needs rather than minimizing them.

The lack of clear and comprehensive policies creates an opportunity for real estate developers to take advantage of the situation. This is evident in the current proliferation of gated societies on the outskirts of cities. However, it is the responsibility of the government to provide accessibility to these areas. A pertinent example is the case of Islamabad, where gated societies have flourished, but the government has not adequately addressed the transportation needs of these areas.

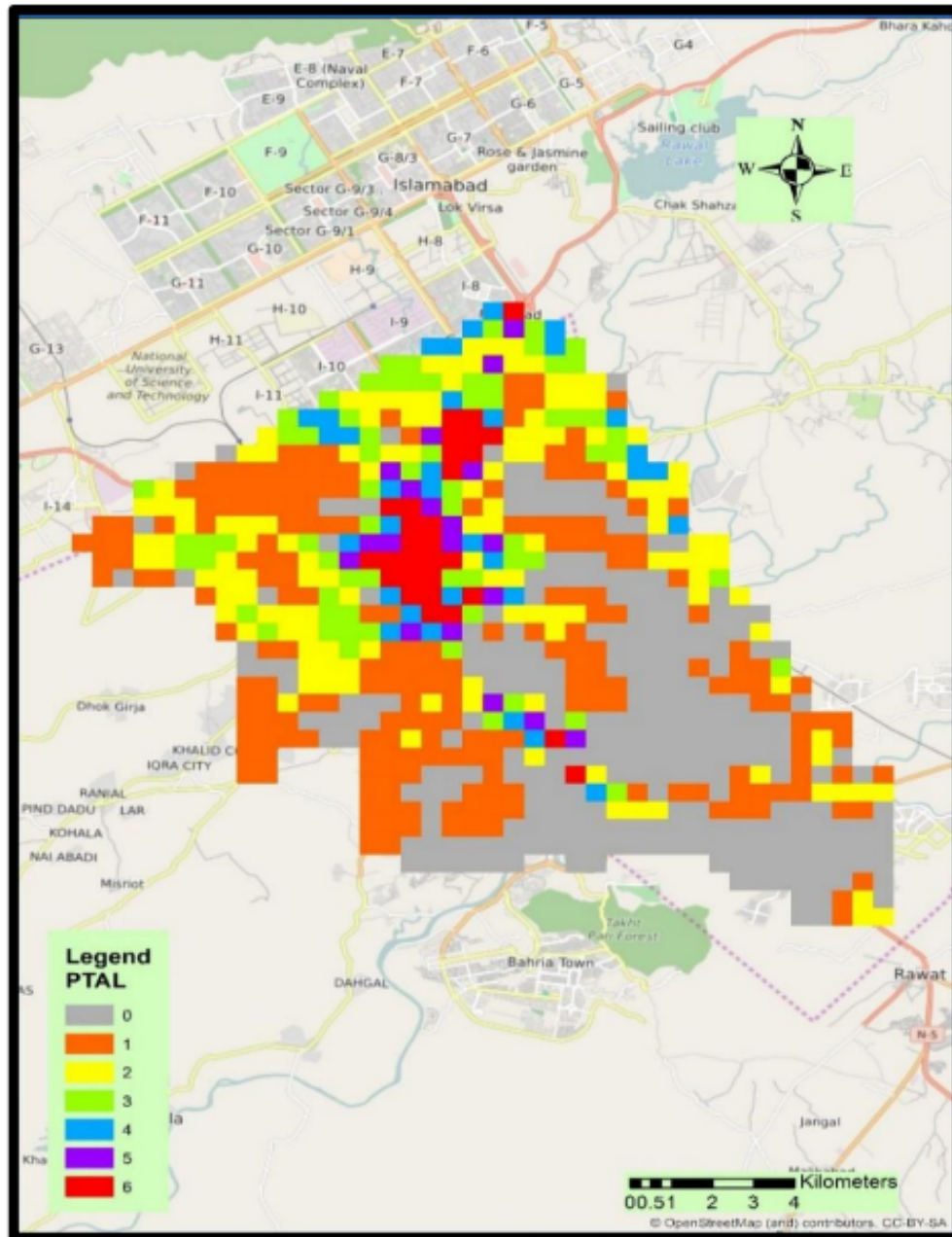


Figure 4.1.8.A: Analysis of urban transport accessibility for citizens of Rawalpindi
Source: Amna Ejaz et al, 2017

The map above depicts a PTAL (Public Transport Accessibility Level) analysis (Amna Ejaz et al, 2017) illustrating the current state of Rawalpindi's public transportation system. Notably, in Figure 4.1.8A, areas primarily shaded in gray towards the southeast indicate the least accessibility by public transport. These zones predominantly encompass gated private housing

societies including PWD, Bahria Town Phase I to VI, and DHA Phase-II, demonstrating the poorest accessibility scores. Badami notes a common scenario in South Asian societies where affluent and economically disadvantaged communities reside in close proximity, a phenomenon also evident in the gated communities of Rawalpindi. These exclusive societies, designed primarily around car usage, pose challenges for individuals from lower-income brackets migrating to seek nearby job opportunities, as they grapple with inadequate accessibility to public transportation.

In conclusion, the unclear and contradictory nature of land use policies in Pakistan has hindered the development of an efficient and accessible urban transportation system. The emphasis on zoning and the neglect of public transport and non-motorized transport options have contributed to congestion and increased reliance on motorized vehicles. Clear and well-integrated policies are essential to promote sustainable urban development and minimize the need for excessive transportation in Pakistani cities.

5. RECOMMENDATIONS

Ensure Policy Consistency: Enact strict policies to maintain consistency in transportation planning and implementation, irrespective of changes in political leadership. This approach will prevent the abrupt termination of ongoing or previously initiated projects, providing stability and continuity in urban transportation development.

Ensure Adequate Funding: It is crucial to establish a mechanism wherein projects generating cash flows allocate a significant portion of their profits back into themselves for sustainable continuity..

Implement Mixed use, High density Land Use Policies: Implementing land use policies that prioritize high-density and mixed-use developments will shift the burden of mobility from public transport to real estate. By promoting compact and interconnected urban areas, these policies can enhance the effectiveness and efficiency of public transportation systems.

Revive Rail Projects and Enhance Management: Address the current supply-demand imbalance in urban public transportation by reevaluating circular railway systems. Reviving previously mismanaged rail projects requires better monitoring, control, and strategic planning to ensure their successful implementation and operation.

Establish Smoother Institutional Integration: Facilitate smoother integration among different institutions involved in urban transportation. Developing policies that encourage collaboration

and coordination between relevant stakeholders will result in more effective decision-making processes and enhance overall system performance.

Foster Collaboration Between Academia and Professionals: Foster collaboration between academic institutions and professionals in the transportation field to encourage the exchange of ideas and promote research initiatives. By integrating academic insights and practical expertise, policy formulation can benefit from a more comprehensive understanding of transportation challenges and innovative solutions.

Implement Dynamic Fare Structures: Introduce fare structures that reflect peak hours and demand fluctuations. By implementing dynamic pricing mechanisms, public transportation systems can better manage congestion and optimize service efficiency during high-demand periods.

Enhance Public Involvement in Policy Making: Foster greater public involvement in the policy-making process for urban transportation. Encourage active engagement, feedback, and participation from citizens to ensure that policies align with the needs and preferences of the communities they serve.

Improve Monitoring and Quality Control: Enhance monitoring mechanisms to ensure the quality and efficiency of the public transport system. By establishing rigorous monitoring protocols, the government can effectively oversee fare and route licensing, standardize vehicles, and ensure adherence to quality standards, as highlighted by Imran (2010).

Establish Task Forces for Project Evaluation: Create dedicated task forces responsible for investigating the factors contributing to the demise of previously successful transportation projects. These task forces can identify the underlying causes, analyze the shortcomings, and propose corrective measures to avoid repeating past failures.

Public Funding and Financing in Public Private Partnership Models: The government should take on the responsibility of financing, providing regulatory frameworks, and ensuring equitable access, while private companies can handle design, construction, operation and management. This collaborative approach brings the benefits of competition, innovation and technological advancements that the private sector can offer. While private companies may not always bring substantial investment, they can contribute expertise and efficiency to improve the overall quality and effectiveness of urban transportation systems.

Synergies: In crafting policies for car-oriented societies, it is imperative to consider and plan for all modes of transport. Emphasizing the importance of fostering synergy among various

transportation modes, the planning process necessitates comprehensive integration, ensuring that the needs of all stakeholders are taken into account.

6. CONCLUSION

In conclusion, this exit project was an attempt to navigate the complexities of urban public transportation policies and understand the underlying reasons for the current deficiencies. Despite initial ambitions, the project faced constraints due to limited data accessibility, resulting in preliminary conclusions.

Throughout this exploration, a crucial takeaway emerged: the pivotal role of comprehensive data collection, especially through inclusive surveys reflecting community preferences, in any urban public transportation endeavor.

Additionally, this project uncovered the pervasive influence of pre-existing biases shaping our perceptions. The initial presumption of a decline in urban public transportation, stemming from historical narratives and ingrained beliefs, was debunked as a product of what my professor termed a 'colonial mindset.' This mindset perpetuated the misconception that Western-built systems were inherently superior, impacting our judgment despite our infrastructure being similarly influenced by Western ideals.

Despite encountering challenges, a notable achievement of this project lies in presenting policies in a concise and easily comprehensible manner. This clarity offers a foundational understanding of the situation, serving as an accessible entry point for anyone approaching the subject before delving into more extensive projects.

Although conclusive evidence to definitively categorize transportation changes from 1947 to 2023 as progress or decline remains elusive, the project underscores the intricate nature of this multifaceted and complex issue.

To combat these deeply ingrained biases and colonial mindsets, advocating for employee training programs that nurture critical thinking in decision-making processes is crucial. Moreover, decision-making must encompass diverse demographic perspectives within the context to ensure equity and inclusivity.

Given the perennial issue of financial constraints, a key recommendation arises: inspiring students to focus their research efforts on urban transportation topics. Such pursuits are instrumental for the economic prosperity of cities and are equally significant as job creation.

While this exit project faced limitations, it serves as a foundational step toward comprehending the challenges surrounding urban public transportation policies. Moving forward, concerted efforts to address biases, prioritize comprehensive data collection, and cultivate critical thinking will be pivotal in shaping efficient and inclusive urban transportation policies.

7. REFERENCES

1. Jabbar, Hassan et al ,2016. Integrated mass transit system for Islamabad.
2. Imran, Muhammad. “*Institutional Barriers to Sustainable Urban Transport in Pakistan.*” Karachi: Oxford University Press, 2010.
3. Mohammad Saadullah. “*Public transport accessibility level (PTAL) based mapping and analysis of Rawalpindi and Islamabad.*” Islamabad:National University of Sciences and Technology, 2016.
4. Sajjad, Fizzah, and Umair Javed. “Democracy, Legitimacy, and Mega-project: Politics: The Evolution of Lahore’s First BRT Corridor.” *Antipode* 54, no. 5 (2022): 1497–1518.
<https://doi.org/10.1111/anti.12829>.
5. The Urban Resource Centre, Karachi, Arif Hasan, and Mansoor Raza. “Responding to the Transport Crisis in Karachi.” International Institute for Environment and Development, 2015.
<http://www.jstor.org/stable/resrep01313>.
6. APTA. “Public Transportation Facts.” American Public Transportation Association, March 10, 2023.
<https://www.apta.com/news-publications/public-transportation-facts/#:~:text=34%20million%20times%20each%20weekday,no%20access%20to%20public%20transportation>.
7. APTA. “Public Transportation Facts.” American Public Transportation Association, March 10, 2023.
<https://www.apta.com/news-publications/public-transportation-facts/#:~:text=34%20million%20times%20each%20weekday,no%20access%20to%20public%20transportation>.
8. Gota, Sudhir. “Walkability and Pedestrian Facilities in Asian Cities: State and Issues.” Academia.edu, December 16, 2015.
https://www.academia.edu/925402/Walkability_and_Pedestrian_Facilities_in_Asian_Cities_State_and_Issues.
9. Imran, Mohammad. “Digital Commons University of South Florida (USF).” Site. Accessed May 18, 2023. <https://digitalcommons.usf.edu/>.
10. Rahman, Habibur. *Public and Private Transport System in Punjab*. Lahore, Pakistan: Punjab Economic Research Institute, 1988.
11. Badami, Madhav G. 2009. "Urban Transport Policy as if People and the Environment Mattered: Pedestrian Accessibility is the First Step." In *Cities of the Global South Reader*, edited by Faranak Miraftab and Neema Kudva. Urban Reader Series.

12. Dimitriou, Harry T. 1995. *A Developmental Approach to Urban Transport Planning*. Vermont, USA: Ashgate Publishing Limited.
13. Pakwheels. 2019. "Most Popular Ride-Hailing Service in Pakistan in 2018!" Pakwheels. Accessed 2023.
<https://www.pakwheels.com/forums/t/most-popular-ride-hailing-service-in-pakistan-in-2018/1095100>.
14. Global BRT Data. 2023. "Lahore - BRTData." BRTData. Accessed 2023.
<https://brtdata.org/location/asia/pakistan/lahore>.
15. Time Doctor. 2023. "What's the Average Salary in Pakistan?" Time Doctor. Accessed 2023.
<https://www.timedoctor.com/blog/average-salary-in-pakistan/>.
16. Associated Press of Pakistan. 2016. "No Increase in BRT Fares, One-Time Ticket: Spokesperson." APP. Accessed 2023.
<https://www.app.com.pk/domestic/no-increase-in-brt-fares-one-time-ticket-spokesperson/>.
17. The Nation. 2023. "No Increase in BRT Fares, One-Time Ticket." The Nation. Accessed 2023.
<https://www.nation.com.pk/17-Aug-2023/no-increase-in-brt-fares-one-time-ticket>.
18. Zameen. 2022. "Inauguration of Orange Line Metro Bus in Islamabad." Zameen Blog. Accessed 2023. <https://www.zameen.com/blog/metro-bus-islamabad.html>.
- a.
19. Myllyntaus, Timo, and Sourabh Naresh Chandra. 2015. "Infrastructure and Railroads." Environment & Society Portal. Accessed 2023.
<https://www.environmentandsociety.org/exhibitions/famines-india/infrastructure-and-railroads>.
20. Environment & Society Portal. 2015. "Infrastructure and Railroads." Map. Accessed November 15, 2023.
<https://www.environmentandsociety.org/exhibitions/famines-india/infrastructure-and-railroads>.
21. Mughal, Owais. 2022. "Karachi Tramway." Fbarea Blog. Published June 14. Accessed 2023.
<https://fbarea.wordpress.com/2023/05/09/karachi-tramway/>.
22. Mughal, Owais. 2022. "Karachi Tramway Map." Map. Accessed November 15, 2023.
<https://fbarea.wordpress.com/2023/05/09/karachi-tramway/>.
23. Illustration by Mariam Fatima, 2023. Adapted from Image Sources:
24. Wikipedia. 2012. "Karachi Circular Railway."
https://en.wikipedia.org/wiki/Karachi_Circular_Railway.
25. Sarah Cheema. 2011. "A VANISHING BREED."
<https://sarahcheema.wordpress.com/2011/05/04/a-vanishing-breed/>.
26. PhotoArchives of Pakistan. 2020. Facebook.
<https://www.facebook.com/303855399725059/posts/tram-was-a-popular-and-affordable-transport-of-mass-is-no-more-nowdate-1950/2816175945159646/>.
27. Samina Mirza. 2022. "Pakistani Bus Art."
<https://seweverythingblog.com/2022/01/11/pakistani-bus-art/>.
28. My Historical Pakistan Society. 2013. Facebook.
<https://m.facebook.com/190053491103230/photos/lahore-omni-bus-service-lahores-first-double-deckers-began-its-operations-in-195/487474051361171/>.
29. Faiz Web TV. 2021. "Jacobabad: Qingqi rickshaw fell in manhole."
<https://www.youtube.com/watch?v=3YG7eXfGGqQ>.

30. Faran Mahmood. 2018. "Peshawar Bus Rapid Transit project in slow lane."
<https://tribune.com.pk/story/1741688/peshawar-bus-rapid-transit-project-slow-lane>.
31. Muhammad Adeel, Anthony G.O Yeh, and Zhang Feng. 2009. "Towards an Inclusive Public Transport System in Pakistan."
https://www.unescap.org/sites/default/files/Article%203_Towards%20and%20inclusive%20public%20transport%20in%20Pakistan.pdf.
32. Gari.pk. 2022. "Osaka Rickshaw 3 Seater 2022 Price in Pakistan & Specs."
<https://www.gari.pk/bikes/osaka/rickshaw-3-seater/>.
33. Careem. 2016. "Booking Cancellation Policy: Cancellation Charges."
<https://m.facebook.com/careempakistan/photos/booking-cancellation-policy:-cancellation-charges/510851739118349/>.
34. Imran, Muhammad. "*Institutional Barriers to Sustainable Urban Transport in Pakistan*." Karachi: Oxford University Press, 2010.
35. Dawn. 2016. "Uber launches rickshaw service uberAuto in Lahore." Image. Accessed [Insert Access Date]. <https://www.dawn.com/news/1290350>.
36. Gabol, Imran. 2016. "Uber launches rickshaw service uberAuto in Lahore." Dawn.
<https://www.dawn.com/news/1290350>.
37. Intelligent Transport. 2019. "Uber acquires Middle East competitor Careem for \$3.1 billion." Image. Accessed [Insert Access Date].
<https://www.intelligenttransport.com/transport-news/77617/uber-acquires-careem-3-billion/>.
38. Gota, Sudhir. 2010. "Walkability Surveys in Asian Cities." Map. Accessed 2023.
https://www.ictct.net/wp-content/uploads/23-Hague-2010/ictct_document_nr_663.pdf.
39. Swami, Vandana. "Environmental History and British Colonialism in India: A Prime Political Agenda." *CR: The New Centennial Review* 3, no. 3 (2003): 113–30.
<http://www.jstor.org/stable/41949868>.
40. Salman Farrukh, Nation.com.pk. 2019. "Harassment incidents and ride-hailing services."
<https://www.nation.com.pk/11-Sep-2019/harassment-incidents-and-ride-hailing-services/>.